

**REMARKS**

Claims 1, 2, 4-11, 14-16 and 18, and 20-22 were examined in the Office Action. Applicant respectfully traverses the rejections and responds to the Office Action. No claims have been amended or cancelled. New dependent claim 25-27 have been added. Claims 1, 2, 4-11, 14-16 and 18, and 20-27 remain pending.

**Allowable Subject Matter**

Applicant gratefully acknowledges the notification of allowable subject matter in claims 23 and 24. Applicant is hereby adding new dependent claims 25-27 reciting the same limitations as claims 23 and 24 but depending from different independent claims.

**Claim Rejections – 35 USC § 103**

Claims 1, 2, 4-11, 14-16, 18 and 20-22 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Ahn et al. (US Patent No. 6,681,111) in view of Murtagh et al. (US Patent Publication No. 2004/0133623) and further in view of Bertrand et al. (U.S. Patent No. 6,408,173).

The Office has the burden under 35 U.S.C. § 103 to establish a prima facie case of obviousness. In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787 (Fed. Cir. 1984). To establish a prima facie case of obviousness, four basic criteria must be met. Obviousness is a question of law based on underlying factual inquiries, which inquiries include: (A) determining the scope and content of the prior art; (B) ascertaining the differences between the claimed invention and the prior art; (C) resolving the level of ordinary skill in the pertinent art; and, if applicable, and (D) secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1 (1966).

Applicants respectfully submit that the present claims are not obvious in view of the cited references under a *Graham* analysis. More specifically, one of ordinary skill in the art would not arrive at Applicant's claimed invention in view of the differences between the cited reference and the presented claims.

**Claims 1, 10, 15, 21 and 22**

Independent claims 1, 10, 15, 21 and 22 recite, *inter alia*, “store the authentication information for the first network so that subsequent accesses of other networks by the mobile station can be authenticated by the GGG without contacting the first network” and “wherein the GGG appears as a visitor location register to both the first and second networks.”

**A. Scope and Content of the Prior Art***U.S. Patent No. 6,681,111 (Ahn)*

Ahn discloses the use of an international roaming gateway system (IRGS) 300 for connecting a CDMA system 100 and a GSM system 200 and converting signals between the networks. (Col. 3, lines 62-65). The IRGS 300 functions as a home location register (HLR) to manage profiles of GSM SIM subscribers from the viewpoint of the CDMA system 100. The IRGS 300 functions as a visitor location register (VLR) in order for the GSM system 200 to read the location of the roaming GSM SIM subscriber from the viewpoint of the CDMA system 100. (Col. 4, lines 34-40). Importantly, where a GSM subscriber roams into the CDMA system 100, authentication of the GSM subscriber is performed by an authentication center 260 (in the GSM system 200) outside the IRGS 300. (Col. 5, line 28 to Col. 6, line 45 and Figs 2 and 3). Where a CDMA subscriber roams into the GSM system 200, authentication of the CDMA subscriber appears to be performed by an authentication center on the CDMA system 100 (Col. 4, lines 8-16).

*U.S. Publication No. 2004/0133623 (Murtagh)*

Murtagh teaches “using a virtual mobile node to allow CDMA operator the ability to offer services to subscribers of GSM network (abstract, paragraphs 0002, 0031 . . . teaches the virtual mobile node (see VM in Figs. 3 and 4) connected to an interworking gateway (see MAR in figure 3 and 4) wherein the virtual mobile node contains both GSM HLR and MSC functions (Paragraphs 0033 and 0041) which means that CDMA operator can offer services to subscribers

of the GSM network (paragraph 0033) and visa versa (paragraph 0034). Note that while Murtagh may disclose facilitating communications between two networks, it is silent as to how authentication of the mobile subscriber occurs.

*U.S. Patent No. 6,681,111 (Bertrand)* – discloses a method and apparatus for generating a billing identifier for a subscriber from a first network roaming within a second network. A mobility gateway enables mobile subscribers from a GSM network to roam within a TDMA network and mobile subscribers from the TDMA network to roam within the GSM network while maintaining access to substantially all of the services and functionalities provided to them within their home network. (See Column 2, lines 49-54)

#### **B. Ascertaining the Differences Between the Claimed Invention and the Prior Art**

As to independent Claims 1, 10, 15, 21 and 22, the Office Action relies on Ahn, Murtagh, and Bertrand as disclosing all limitations.

##### **Limitations**

- *store the authentication information for the first network so that subsequent accesses of other networks by the mobile station can be authenticated by the GGG without contacting the first network.*
- *wherein the GGG appears as a visitor location register to both the first and second networks*

The Office Action states on page 4 that “Ahn in view of Murtagh do not explicitly show the MS can be authenticated by the GGG without contacting the first network wherein the GGG appears as a visitor location register to both networks.” Applicant agrees.

To overcome the deficiencies of Ahn and Murtagh, the Office Action appears to rely on Bertrand as teaching these limitations. Specifically, in the Office Action (bottom of page 4 to top of page 5), it is noted that Bertrand “teaches a mobile gateway that appears as a visitor location to a first and second network (title, abstract, figure 4, see col. 4 lines 32-53 wherein the message

from the mobility gateway appears to come from HLR from the point of view of the VLR and appear to come from a VLR from the point of view of the HLR) enabling billing records associated with the GSM subscriber that has roamed into another network to be properly tracked and accounted for (col. 4 lines 54-62).” However, such analysis merely addresses the claimed limitation of “wherein the GGG appears as a visitor location register to both the first and second networks”. The Office Action fails to disclose any reference, or identify any specific section in Bertrand, that teaches the limitation of “*store the authentication information for the first network so that subsequent accesses of other networks by the mobile station can be authenticated by the GGG without contacting the first network*”. Bertrand merely discloses that a routing request message from a mobility gateway appears to come from a TDMA HLR from the point of view of the TDMA MSC/VLR while messages to a GSM HLR from the mobility gateway appear to come from a GSM MSC/VLR from the point of view of the GSM HLR. (See Col. 4, lines 32-44) In other words, the messages in Bertrand appear to be coming from within the same network and not from a different network. Nowhere does Bertrand disclose, teach or suggest storing authentication information after a first access of different (or second) network such that any subsequent access to that different (or second) network *can be authenticated by the GGG without contacting the original (or first) network*.

Consequently, Applicant submits that the Office Action has failed to establish a prima facie case of obviousness as it *has not been shown* that all elements of the claimed invention are found in or would have been suggested by a combination of prior art references. (*See Velander v. Garner*, 348 F.3d 1359, 1363 (Fed. Cir. 2003)).

#### **Claims 2, 4, 5, 7, 11, 14, 16, and 20-22**

As to dependent claims 2, 4-9, 7, 11, 14, 16, 18 and 20-22 the Office Action also cites Ahn, Murtagh and Bertrand, either alone or in combination, as teaching the recited limitations. While Applicant disagrees that the cited prior art teaches the limitations recited in these claims, this argument need not be reached since these dependent claims are in condition for allowance due to their dependence on independent claims 1, 10 and 15.

Applicant has reviewed the references made of record and asserts that the pending claims are patentable over the references made of record.

In view of the above, therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of, and/or objection and allowance of claims 1, 2, 4-11, 14-16, 18, and 20-27.

Should any of the above rejections be maintained, Applicant respectfully requests that the noted limitations be identified in the cited references with sufficient specificity to allow Applicant to evaluate the merits of such rejections. In particular, rather than generally citing whole sections or columns, Applicant requests that the each claimed element be specifically identified in the prior art to permit evaluating the references.

### CONCLUSION

In light of the amendments contained herein, Applicant submits that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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